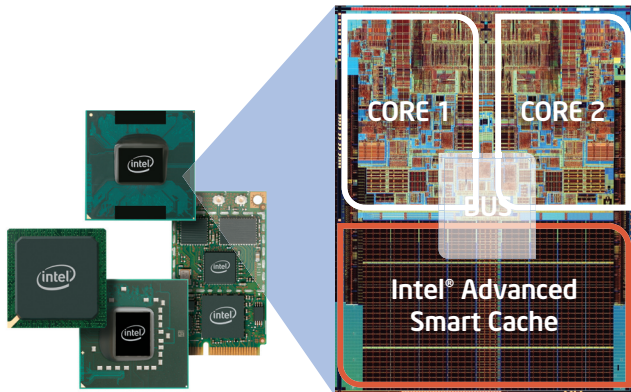


Intel® Centrino® Processor Technology with New Intel® Core™2 Duo Processor

More performance. More freedom. More bandwidth.



Intel® Centrino® processor technology

- New 45nm Intel® Core™ Duo processor
- Mobile Intel® 965 Express Chipset Family
- Intel® Next-Gen Wireless-N (Intel® Wireless WiFi Link 4965AGN) or Intel® PRO/Wireless 3945ABG Network Connection
- Intel® Turbo Memory (Optional)

▪ CPU performance for high-def movies and music:

Enjoy the performance of the Intel® Centrino® processor technology – it provides the computing power for a great high-def experience and you can enjoy the rich sound quality of your music, movies and gaming with Intel® High Definition Audio.

▪ Innovate with amazing multimedia performance:

Now you can get up to 50% more performance on intensive multimedia like HD video encoding with Intel® HD Boost.¹

▪ Designed for the longest possible battery life⁵:

Unique new power management and power saving features help extend battery life so you can enjoy more entertainment, gaming, and music while on the go. Stay unplugged longer.

▪ Use less, do more:

New T8000^A and T9000^A series CPUs are lead-free and have unique power-saving features like Intel® Deep Power Down for conserving energy and protecting the environment.

▪ Faster, broader, better:

Now up to 5X faster wireless performance and up to 2X greater range than 802.11 a/g solutions with an Intel Centrino processor technology-based notebook with optional Intel® Next-Gen Wireless-N and a wireless-N home network.²

▪ Need for speed?:

Look for Vista*-based notebooks with new Intel® Turbo Memory for up to 2X faster performance when loading frequently used, memory-intensive applications³ and better boot time.⁴

Reinventing Performance, Redefining Efficiency.

Intel Centrino processor technology featuring the new Intel® Core™2 Duo processor enables outstanding mobile dual-core performance while enabling improved battery life and enhanced wireless connectivity – all in a variety of laptop designs so you can choose the right one for you, your family or your business.



Intel's Best Technologies for Notebooks

Feature	Benefit
Intel® Core™2 Duo Processor	
Intel® 45nm high-k (Hi-k) metal gate silicon technology is the next-generation Intel® Core™ microarchitecture. With roughly twice the density of Intel® 65nm technology, Intel's 45nm packs more transistors into the same silicon space.	Improved performance and responsiveness to run multiple demanding applications simultaneously with unique new power-saving features, enabling great battery life. ⁵
Larger Intel® Advanced Smart Cache	
Intel® Advanced Smart Cache is now even larger – up to 6 MB, so more data can be kept near the processing cores. Intel's unique shared L2 cache allows both cores access to the full L2 memory area, and allows shared data to be accessed from cache, minimizing bus traffic. It also allows one core to use the entire cache when the other core is inactive. This design provides twice the bandwidth to L1 cache compared to the previous-generation Intel® Core™ Duo processor.	Larger, smarter and more efficient cache design enables better performance, responsiveness, and power savings.
Intel® HD Boost	
47 new multi-media instructions and a faster Super Shuffle Engine that processes all streaming SIMD extensions faster.	Doubles the rate at which streaming media instructions can be executed. Great for multimedia applications, such as video editing, digital photography, and gaming. Allows up to 50% greater performance on HD Video Encoding. ¹
Lead-Free	
Materials in Intel® 45nm technology are now 100 percent lead-free.	Reduced lead's potential impact to the environment and public health.
Intel® Deep Power Down Technology	
Intel® Deep Power Down Technology is a new low-power state that allows both cores and L2 cache to be powered down when the processor is idle.	The power to use less and do more – Intel's unique power-saving features enable longer battery life so you can stay unplugged longer and help the environment by conserving natural resources. ⁵
Intel® Dynamic Power Coordination	
Helps manage voltage and power consumption. One core can demand high performance while the other core can independently transition to a low-power state.	Enables reduction in power consumption and enables improved battery life. ⁵
Mobile Intel® GM965 Express Chipset featuring Mobile Intel® Graphics Media Accelerator X3100 (Optional)	
Next-generation graphics include software enhancements enabling DirectX*10, ⁶ Hardware Transform and Lighting, and Vertex Shader Model 3.0	Enables greater visual detail, realism and an enhanced overall gaming experience. Also supports compatibility for more gaming titles and greater gaming content. Display settings and power management features minimize power consumption, enabling improved battery life. Up to 2X performance on graphics applications as measured by 3DMark*06 versus previous graphics engine. ⁷
Intel® Clear Video Technology	
Video technology delivering enhanced video quality.	Provides outstanding video playback with sharper image quality, increased clarity, and customizable color controls.
Enhanced Support for a high-definition experience	
HD DVD* and Blu-ray* logo support now enabled with integrated graphics (via a third-party decoder). Support for digital interface with integrated audio and HDCP content protection. ⁸ Enhanced hardware acceleration for MPEG2 and WMV9B* playback.	Intel helps bring high-definition to mainstream – HD DVD* and Blu-ray* logo support now enabled with integrated graphics. Enhanced HD experience with improved HDTV connectivity and HDMI supporting up to 1080p and easy-to-use TV configuration utility, Intel® TV Wizard.

Intel's Best Technologies for Notebooks continued

Feature	Benefit
Intel® PRO/Wireless 3945ABG Network Connection	
Connects to most available industry-standards-based wireless LAN (802.11b, 802.11a, and 802.11g) infrastructures.	Flexibility to connect to your wireless home network and public wireless LAN hotspots located in airports, hotels, restaurants, and coffee shops around the world. ¹⁰
Intel® Next-Gen Wireless-N (Intel® Wireless WiFi Link 4965AGN) (Optional)	
Up to 5X faster compared to 802.11a/g products with data rates up to 300 Mbps. ² Support for legacy and latest high throughput WLAN technologies provides connectivity options for multiple environments.	Helps overcome network capacity issues, allowing increased simultaneous network activity for large file transfers, streaming HD video, multi-player gaming, VOIP and more.
Up to 2X² greater range with MIMO and antenna diversity support	
MIMO technology leverages multipath behavior by using multiple, "smart" transmitters and receivers with an added "spatial" dimension to increase performance and range.	Reduces the number of "dead zones," dropped data packets, network re-connects, and dramatically improves connectivity throughout the home.
"Connect with Intel® Centrino™" Identifier	
Intel has certified access points from leading vendors, through extensive compatibility and real-world performance testing, to help ensure high throughput and seamless connectivity in Draft-N ⁹ mode.	Connect with confidence with a large selection of WLAN AP/router products that enable a great Draft-N ⁹ experience for Intel® Centrino® processor technology customers.
Great battery life⁵ with optimized power modes	
Reduced WLAN power consumption can help deliver great battery life. ⁵	Allows for greater utility, enjoyment, and convenience.
Intel® Turbo Memory (Optional)	
Flash Memory Technology supporting both Windows Vista® ReadyDrive and ReadyBoost functions for read and write information caching. Stores large amounts of frequently used information close to the processor to reduce system bottlenecks.	Look for Vista®-based notebooks with new Intel® Turbo Memory for up to 2X faster performance when loading frequently used, memory-intensive applications ³ and better boot time. ⁴

Discover more about Intel Centrino processor technology with the Intel Core 2 Duo processor now at intel.com/products/centrino/centrino/index.htm

Find out how you can create custom notebooks for custom performance needs at intel.com/go/channelnotebooks

¹ Intel processor numbers are not a measure of performance. Processor numbers differentiate features within each processor family, not across different processor families. See www.intel.com/products/processor_number for details.

² Performance measured based on TMPGEncoder* Xpress* 4.4 optimized for Intel® HD Boost, comparing latest generation pre-production Intel® Core™ Duo Processor T9500 & T8100 with a comparable frequency previous generation Intel® Core™ Duo Processor. Actual performance may vary. See <http://www.intel.com/performance/mobile/benchmarks.htm> for important additional information.

³ Up to 2x greater range and up to 5x better performance with optional Intel® Next-Gen Wireless N technology enabled by 2x3 Draft N implementations with 2 spatial streams. Actual results may vary based on your specific hardware, connection rate, site conditions, and software configurations. See <http://www.intel.com/performance/mobile/wireless/index.htm> for more information. Also requires a Connect with Intel® Centrino® processor technology certified wireless n access point. Wireless n access points without the Connect with Intel Centrino processor technology identifier may require additional firmware for increased performance results. Check with your PC and access point manufacturer for details.

⁴ Tests run on latest generation Intel® Centrino® processor technology with optional Intel® Turbo Memory enabled against like systems without Intel® Turbo Memory running Google® Earth and Adobe Photoshop® Elements 5.0. Results may vary based on hardware, software and overall system configuration. All tests and ratings reflect the approximate performance of Intel products as measured by those tests. All testing was done on Microsoft Vista® Ultimate (build 6000). Application load and runtime acceleration depend on Vista's preference to pre-load those applications into the Microsoft ReadyBoost® cache. See http://www.intel.com/performance/mobile/Intel_Turbo_Memory.htm for more information.

⁵ Tests run on latest generation Intel® Centrino® processor technology with optional Intel® Turbo Memory enabled against like systems without Intel® Turbo Memory. Results may vary based on hardware, software and overall system configuration. All tests and ratings reflect the approximate performance of Intel products as measured by those tests. All testing was done on Microsoft Vista® Ultimate (build 6000). Application load and runtime acceleration depend on Vista's preference to pre-load those applications into the Microsoft ReadyBoost® cache. Boot-time performance depends on BIOS and POST execution times as well as hard drive performance. Power savings will depend upon the system power management settings as well as the specific hard drive used. See http://www.intel.com/performance/mobile/Intel_Turbo_Memory.htm for more information.

⁶ System performance, battery life, power savings, high-definition quality, video playback and functionality, and wireless performance and functionality will vary depending on your specific operating system, hardware, chipset, connection rate, site conditions, and software configurations. References to enhanced performance refer to comparisons with previous generation Intel technologies. See <http://www.intel.com/products/centrino/index.htm> and <http://www.intel.com/performance/mobile/benchmarks.htm> for more information on performance, power savings and energy efficiency.

⁷ DirectX®10 feature not available at product launch. Expected availability is March 2008 and will be available as a software download via intel.com.

⁸ As measured by 3DMark®06 comparing latest generation Intel® Centrino® processor technology-based notebooks including Intel integrated graphics with previous generations of Intel Centrino processor technology. Actual performance may vary. See <http://www.intel.com/performance/mobile/benchmarks.htm> for important additional information.

⁹ Some features and security solutions may not be supported by your PC's operating system and may require additional software and/or certain hardware as well as wireless LAN infrastructure support. Check with your PC manufacturer for details.

¹⁰ "Draft-N" refers to: IEEE P802.11n/D1.0 Draft Amendment to STANDARD [FOR] Information Technology-Telecommunications and information exchange between systems-Local and Metropolitan networks-Specific requirements-Part 11: Wireless LAN Medium Access Control (MAC) and Physical Layer (PHY) specifications: Enhancements for Higher Throughput.

¹¹ Wireless functionality may vary by country and some hotspots may not support Linux-based Intel® Centrino® processor technology systems. See www.intel.com/products/centrino/index.htm for more information.

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